

July 2014 SMS Bridge Inspection Form Needs

Element		Element Display from Inventory			Element		Total Quantity Equation	
		Form Display Current Needs	Current Display Switch =	Current Needs (not yet implemented), Element Should Display When. . . .			Currently Total Quantity =	Current Needs (not yet implemented), Total Quantity Should =
APPROACH	C1. Approach Wearing Surface	Change Units from SF to EA	(403) Approach Pavement Wearing Surface Type ≠ N		APPROACH	C1. Approach Wearing Surface	2 X (32) Approach Roadway Width X 25	2
	C2. Approach Slabs		(404) Approach Slab Type ≠ 3 - NONE			C2. Approach Slabs	2X (32) Approach Roadway Width X (405) Approach Slab Length	
	C3. Relief Joint		(403) Approach Pavement Wearing Surface Type = 1	(403) Approach Pavement Wearing Surface Type = 1 or 0		C3. Relief Joint	(32) Approach Roadway Width X 2	
	C4. Embankment	Change Units from LF to EA, Text for (413) should be (413) Embankment Count	(403) Approach Pavement Wearing Surface Type ≠ N			C4. Embankment	(413) Embankment Total Length	
	C5. Guardrail	Change Units from LF to EA, Text for (400) should be (400) Approach Guardrail Count	(401) Approach Guardrail Type ≠ N , X			C5. Guardrail	(400) Approach Guardrail Length	
DECK	C7. Floor/Slab		(107) Deck Structure Type ≠ N		DECK	C7. Floor/Slab	(49) Structure Length X (52) Deck Width O-O	
	C8. Wearing Surface		(108A) Wearing Surface Type ≠ N			C8. Wearing Surface	(49) Structure Length X (51) Bridge Rdwy Width Curb-Curb	
	C9. Curb/Sidewalk/Walkway		(426) Curb/Sidewalk Left Side - Type OR (428) Curb/Sidewalk Right Side - Type ≠ N			C9. Curb/Sidewalk/Walkway	(49) Structure Length [1 side present] OR (49) Structure Length X 2 [both sides present]	
	C10. Median		(33) Bridge Median Type ≠ N			C10. Median	(49) Structure Length	(49) Structure Length (i.e. this TQ is not linked)
	C11. Railing		(407) Bridge Railing Type ≠ N			C11. Railing	(49) Structure Length X 2	
	C12. Drainage	Change Units from LF to EA	(409) Deck Drainage Type ≠ N			C12. Drainage	(410) Deck Drainage Quantity OR NONE [when (409) = 1]	(410) Deck Drainage Quantity (i.e. this TQ is not linked)
	C13. Expansion Joint		(414) Expansion Joint Type ≠ N	(414) Expansion Joint Type ≠ N (i.e. it displays this element when = N)		C13. Expansion Joint	(415) Expansion Joints Total Length	

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SUPERSTRUCTURE	C14. Alignment	Change Units from LF to EA	(43) Main Structure Type OR (44) Approach Span Type ≠ X9X or XNX	(43) Main Structure Type OR (44) Approach Span Type ≠ X9X or XNX (i.e. this element is always displayed even when structure type = X9X)	C14. Alignment	(307) Total Number of Spans:	(45) No. of Main Spans + (46) No. of Approach Spans (and replace item 501 on the inventory shortcuts with (45) and (46))	
	C15. Beams/Girders		(475) Main Member Type ≠ N		C15. Beams/Girders	(473) Main Beam Total Length		
	C16. Diaphragm/X-Frames		(475) Main Member Type ≠ N, 0, C	(475) Main Member Type ≠ N, 0, C (display is not working when element = N)	C16. Diaphragm/X-Frames	(460) Diaphragms/Cross Frames Total Count		
	C17. Stringers		(43) Main Structure Type OR (44) Approach Span Type = X4X, 35X, 37X, X6X, X8X, XAX, XX7, XX8, XX9, XXA	*The following (43) Main Structure Type OR (44) Approach Span Type should be but are not displaying C17. Stringer: X5X, 37X, XAX, XX7, XX8, XX9, XXA.	C17. Stringers	(488) Joists/Stringers Total Length		
	C18. Floorbeams		(43) Main Structure Type OR (44) Approach Span Type = X4X, 35X, 37X, X6X, X8X, XAX, XX7, XX8, XX9, XXA	*The following (43) Main Structure Type OR (44) Approach Span Type should be but are not displaying C18. Floorbeam: X5X, 37X, XAX, XX7, XX8, XX9, XXA. Need to display for all X5X	C18. Floorbeams	(463) Floor Beams Total Length		
	C19. Truss Verticals		(43) Main Structure Type OR (44) Approach Span Type = X4X, XX4, XXA		C19. Truss Verticals	(495) Verticals Total Count		
	C20. Truss Diagonals		(43) Main Structure Type OR (44) Approach Span Type = X4X, XX4, XXA		C20. Truss Diagonals	(489) Diagonals Total Count + (490) End Posts Total Count		
	C21. Truss Upper Chord		(43) Main Structure Type OR (44) Approach Span Type = X4X, XX4, XXA		C21. Truss Upper Chord	(494) Upper Chords Total Count		
	C22. Truss Lower Chord		(43) Main Structure Type OR (44) Approach Span Type = X4X, XX4, XXA		C22. Truss Lower Chord	(491) Lower Chords Total Count		
	C23. Truss Gusset Plate		(43) Main Structure Type OR (44) Approach Span Type = X4X, XX4, XXA		C23. Truss Gusset Plate	(496) Gusset Plates Total Count		
	C24. Lateral Bracing		(493) Upper and Lower Lateral Bracing Total Count > 0		C24. Lateral Bracing	(493) Upper and Lower Lateral Bracing Total Count		
C25. Sway Bracing		(43) Main Structure Type OR (44) Approach Span Type = X4X, 35X, XX7, XX8, XX9, XXA	The following (43) Main Structure Type OR (44) Approach Span Type should be but are not displaying C25. Sway Bracing = 35X, XX7, XX8, XX9, XXA	C25. Sway Bracing	(492) Sway Bracing Total Count			
SUPERSTRUCTURE	C14. Alignment				C14. Alignment	(307) Total Number of Spans:	(45) No. of Main Spans + (46) No. of Approach Spans (and replace item 501 on the inventory shortcuts with (45) and (46))	
	C15. Beams/Girders				C15. Beams/Girders	(473) Main Beam Total Length		
	C16. Diaphragm/X-Frames				C16. Diaphragm/X-Frames	(460) Diaphragms/Cross Frames Total Count		
	C17. Stringers				C17. Stringers	(488) Joists/Stringers Total Length		
	C18. Floorbeams				C18. Floorbeams	(463) Floor Beams Total Length		
	C19. Truss Verticals				C19. Truss Verticals	(495) Verticals Total Count		
	C20. Truss Diagonals				C20. Truss Diagonals	(489) Diagonals Total Count + (490) End Posts Total Count		
	C21. Truss Upper Chord				C21. Truss Upper Chord	(494) Upper Chords Total Count		
	C22. Truss Lower Chord				C22. Truss Lower Chord	(491) Lower Chords Total Count		
	C23. Truss Gusset Plate				C23. Truss Gusset Plate	(496) Gusset Plates Total Count		
	C24. Lateral Bracing				C24. Lateral Bracing	(493) Upper and Lower Lateral Bracing Total Count		
C25. Sway Bracing				C25. Sway Bracing	(492) Sway Bracing Total Count			

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	C26. Bearing Devices		(453) Bearing Device 1 Type ≠ N				(454) Bearing Device 1 Total Count + (456) Bearing Device 2 Total Count + (458) Bearing Device 3 Total Count	
	C27. Arch		(43) Main Structure Type OR (44) Approach Span Type = X5X				(451) Arch Length	
	C28. Arch Column/Hanger		(43) Main Structure Type OR (44) Approach Span Type = X53				(450) Arch Columns or Hangers Total Count	
	C29. Arch Spandrel Walls		(43) Main Structure Type OR (44) Approach Span Type = X55				(484) Spandrel Walls Total Length	
	C30. Protective Coating System		(482) Protective Coating System Type ≠ N				(463) Floor Beams Total Length + (473) Main Beam Total Length + (488) Joists/Stringers Total Length + (497a) Total Concrete Protective Coating + (497b) Total Truss Line Quantity + (497c) Total Steel Pier Cap Quantity	
	C31. Pins/Hangers/Hinges		(468) Hinges/Pins/Hangers Type ≠ N				(469) Hinges Total Count	
	C32. Fatigue		(43) Main Structure Type OR (44) Approach Span Type = 3XX, 6XX, 7XX, 8XX. Keep hidden for X9X culverts.				(463) Floor Beams Total Length + (473) Main Beam Total Length + (488) Joists/Stringers Total Length + (497b) Total Truss Line Quantity + (497c) Total Steel Pier Cap Quantity	

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<b>SUBSTRUCTURE</b>	C33. Abutment Walls		(526) Abutment Forward Type OR (531) Abutment Rear Type ≠ N		<b>SUBSTRUCTURE</b>	C33. Abutment Walls	$[(52) \text{ Deck Width O-O X } 2] / \cos[(34) \text{ Skew Angle}]$	
	C34. Abutment Caps		(526) Abutment Forward Type OR (531) Abutment Rear Type ≠ N			C34. Abutment Caps	$[(52) \text{ Deck Width O-O X } 2] / \cos[(34) \text{ Skew Angle}]$	
	C35. Abutment Columns/Bents		(526) Abutment Forward Type OR (531) Abutment Rear Type ≠ N			C35. Abutment Columns/Bents	(525) Abutment Columns or Bents Total Count	
	C36. Pier Walls		(534) Pier 1 Type ≠ N			C36. Pier Walls	$[(52) \text{ Deck Width O-O X } (545) \text{ Pier Total Count}] / \cos[(34) \text{ Skew Angle}]$ OR Cantilever (Tee) Solid Pier Wall Total Width [if Type = 3]	
	C37. Pier Caps		(534) Pier 1 Type ≠ N			C37. Pier Caps	$[(52) \text{ Deck Width O-O X } (545) \text{ Pier Total Count}] / \cos[(34) \text{ Skew Angle}]$	
	C38. Pier Columns/Bents		(534) Pier 1 Type ≠ N			C38. Pier Columns/Bents	(543) Pier Columns/Bents Total Count	
	C39. Backwalls		(353) Bearing Device 1 ≠ N			C39. Backwalls	$[(52) \text{ Deck Width O-O X } 2] / \cos[(34) \text{ Skew Angle}]$	
	C40. Wingwalls	Change Units from LF to EA, Change (548) text to "Wingwalls Total Count"	(43) Main Structure Type ≠ X9X			C40. Wingwalls	(548) Wingwalls Total	
	C42. Scour	Change Units from LF to EA	(43B) Main Structure Type ≠ X9X and (42) Type of Service Under = 5, 6, 7, 8			C42. Scour	$[(52) \text{ Deck Width O-O X } 2] / \cos[(34) \text{ Skew Angle}] + [(52) \text{ Deck Width O-O X } (545) \text{ Pier Total Count}] / \cos[(34) \text{ Skew Angle}]$	(45) No. of Main Spans + (46) No. of Approach Spans + 1
C43. Slope Protection	Change Units from LF to EA, Change (661) text to "Slope Protection Total Count"	(547) Slope Protection Type ≠ N		C43. Slope Protection	(661) Slope Protection Total Length			

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CULVERT	C44. General		(43) Main Structure Type OR (43) Main Structure Type = X9X		CULVERT	C44. General	(578) Culvert Length Inlet_to_Outlet X (585) Number of Cells (501) Number of Spans	(578) Culvert Length Inlet_to_Outlet X ((45) No. of Main Spans + (46) No. of Approach Spans)
	C45. Alignment		(43) Main Structure Type OR (43) Main Structure Type = X9X			C45. Alignment	(578) Culvert Length Inlet_to_Outlet X (585) Number of Cells (501) Number of Spans	(578) Culvert Length Inlet_to_Outlet X ((45) No. of Main Spans + (46) No. of Approach Spans)
	C46. Shape		(43) Main Structure Type OR (44) Approach Type = 39X, 69X, 79X, 89X, 09X			C46. Shape	(578) Culvert Length Inlet_to_Outlet X (585) Number of Cells (501) Number of Spans	(578) Culvert Length Inlet_to_Outlet X ((45) No. of Main Spans + (46) No. of Approach Spans)
	C47. Seams		(43) Main Structure Type OR (43) Main Structure Type = X9X			C47. Seams	(578) Culvert Length Inlet_to_Outlet	(579) Culvert Seams Total Count
	C48. Headwall/Endwall	Change (577) text to "Culvert Headwalls/Endwalls Count"	(582) Headwalls or Endwalls Type ≠ N			C48. Headwall/Endwall	(577) Culvert Headwalls/Endwalls Length	
	C49. Scour		(43B) Main Structure Type = X9X and (42) Type of Service Under = 5, 6, 7, 8			C49. Scour	(660) Culvert Scour Length	2 X ((45) No. of Main Spans + (46) No. of Approach Spans)
	C50. Abutments		(526) Abutment Forward Type OR (531) Abutment Rear Type ≠ N	(575) Bridge/Culvert Type = 1, 5, 7, O, D, E, F		C50. Abutments	(578) Culvert Length Inlet_to_Outlet X (585) Number of Cells	(578) Culvert Length Inlet_to_Outlet X (45) No. of Main Spans + (46) No. of Approach Spans)
CHANNEL	C51. Alignment		(42B) Type of Service = 5, 6, 7, 8		CHANNEL	C51. Alignment	200	
	C52. Protection		(655) Channel Protection Type ≠ X,N			C52. Protection	200	
	C53. Hydraulic Opening		(42B) Type of Service = 5, 6, 7, 8			C53. Hydraulic Opening	(307) Total Number of Spans	
	C54. Navigation Lights		(38) Navigation Control = Y			C54. Navigation Lights	(650) Navigation Lights Total Count	
SIGNS AND UTILITIES	C55. Signs		(279) Signs on Bridge OR (281) Signs Under Bridge = Y		SIGNS AND UTILITIES	C55. Signs	(282) Warning/Regulatory Signs Total	
	C56. Sign Supports		(279) Signs on Bridge OR (281) Signs Under Bridge = Y			C56. Sign Supports	(280) Sign Supports Total Count	
	C57. Utilities		(265) Electric Line OR (266) Gas Line OR (267) Telephone Line OR (268) TV Cable Bridge OR (269) Sanitary Sewer OR (270) Water Line OR (271) Other Utilities = Y			C57. Utilities	(265) Electric Line Length + (266) Gas Line Length + (267) Telephone Line Length + (268) TV Cable Bridge Length + (269) Sanitary Sewer Length + (270) Water Line Length + (271) Other Utilities Length	